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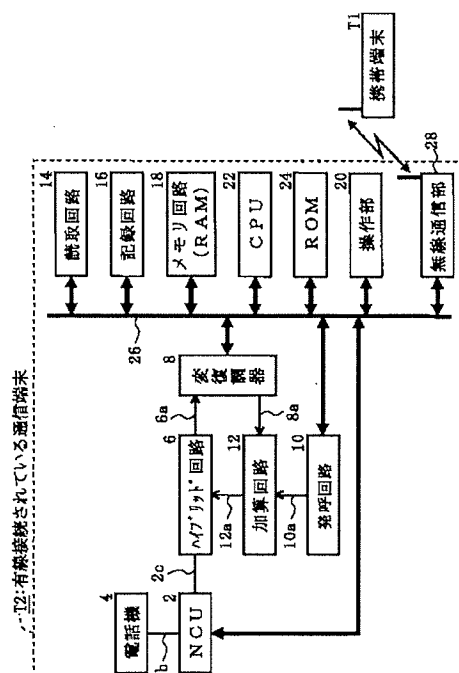
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(54) 【発明の名称】 通信装置システム

(57) 【要約】

【課題】 無線接続される携帯端末によって、外出時の通信が可能であり、一方、無線接続される携帯端末を自宅で使用し、有線接続されている通信端末が近くに存在している場合には、通信費を安く抑えることができる通信装置システムを提供することを目的とするものである。

【解決手段】 無線接続されている携帯端末からの送信が選択されたときに、近くに有線接続されている通信端末が存在するか否かに応じて、無線接続されている携帯端末から直接、通信を実行するか、または、上記携帯端末から無線を介して通信せずに、有線接続されている通信端末を使用し、有線を介して通信を実行するかを決定する通信装置システムである。



【特許請求の範囲】

【請求項1】 無線接続される携帯端末と、有線接続されている通信端末とを有する通信装置システムにおいて、

無線接続されている携帯端末からの送信が選択されたときに、近くに有線接続されている通信端末が存在するか否かに応じて、無線接続されている携帯端末から直接、通信を実行するか、または、上記携帯端末から無線を介して通信せずに、有線接続されている通信端末を使用し、有線を介して通信を実行するかを決定することを特徴とする通信装置システム。

【請求項2】 請求項1において、

無線接続されている携帯端末からの送信が選択されたときに、有線接続されている通信端末が、近くに存在していないと、無線接続される携帯端末から直接、通信を実行し、

一方、有線接続されている通信端末が、近くに存在していれば、上記携帯端末から無線を介した通信をせずに、有線に接続されている通信端末を使用し、有線を介して通信を実行することを特徴とする通信装置システム。

【請求項3】 請求項1または請求項2において、有線接続されている通信端末が近くに存在していても、携帯端末からの無線を介した通信を選択できることを特徴とする通信装置システム。

【請求項4】 請求項1において、

有線接続されている通信端末が、近くに存在していれば、上記携帯端末から無線を介した通信をせずに、有線に接続されている通信端末を使用し、有線を介して通信を実行するモードを第1のモードとし、無線接続されている携帯端末から特定の通信モードが選択されたときには、上記第1のモードを無効とし、無線接続されている携帯端末から直接、通信を実行することを特徴とする通信装置システム。

【請求項5】 請求項4において、

上記特定の通信モードは、Eメール送信であることを特徴とする通信装置システム。

【請求項6】 請求項4または請求項5において、

上記特定の通信モード以外の通信モードは、ウェブ通信またはファクシミリ通信であることを特徴とする通信装置システム。

【発明の詳細な説明】**【0001】**

【発明の属する技術分野】本発明は、通信装置システム、特に、無線接続される携帯端末と、有線接続されている通信端末とを有する通信装置システムに関するものである。

【0002】

【従来の技術】無線接続される携帯端末と、有線接続さ

れたときに、有線接続されている通信端末との間で無線を介した通信を実行し、この有線接続されている通信端末から、有線を介して通信を実行する通信装置システムが提案されている。

【0003】

【発明が解決しようとする課題】しかし、上記従来例の通信装置システムにおいては、無線接続される携帯端末からの通信が、必ず、有線接続されている通信端末を介して通信を実行するので、無線接続される携帯端末を外出時に持ち出し、有効利用することができないという問題がある。

【0004】本発明は、無線接続される携帯端末によって、外出時の通信が可能であり、一方、無線接続される携帯端末を自宅で使用し、有線接続されている通信端末が近くに存在している場合には、通信費を安く抑えることができる通信装置システムを提供することを目的とするものである。

【0005】

【課題を解決するための手段】本発明は、無線接続されている携帯端末からの送信が選択されたときに、近くに有線接続されている通信端末が存在するか否かに応じて、無線接続されている携帯端末から直接、通信を実行するか、または、上記携帯端末から無線を介して通信せずに、有線接続されている通信端末を使用し、有線を介して通信を実行するかを決定する通信装置システムである。

【0006】

【発明の実施の形態および実施例】〔第1の実施例〕図1は、本発明の第1の実施例である通信装置システムCS1を示すブロック図である。

【0007】通信装置システムCS1は、携帯端末T1と、有線接続されている通信端末T2とによって構成されている。

【0008】有線接続されている通信端末T2は、ファクシミリ装置であり、NCU2～無線通信部28によって構成され、無線接続される携帯端末は、携帯端末T1である。

【0009】NCU（網制御装置）2は、電話網をデータ通信等に使用するために、その回線の端末に接続し、電話交換網の接続制御を行ったり、データ通信路への切り換えを行ったり、ループの保持を行うものである。また、NCU2は、バス26からの制御によって、電話回線2aを電話機側に接続（CMLオフ）したり、電話回線2aをファクシミリ装置側に接続（CMLオン）するものである。なお、通常状態では、電話回線2aは、電話機4側に接続されている。

【0010】ハイブリッド回路6は、送信系の信号と受信系の信号とを分離し、加算回路12からの送信信号を

器8に送るものである。

【0011】変復調器8は、ITU-T勧告V. 8、V. 21、V. 27ter、V. 29、V. 17、V. 34に基づいた変調と復調とを行う変復調器であり、バス26の制御によって、各伝送モードが指定される。変復調器8は、バス26からの送信信号を入力し、変調データを信号線8aに出力し、信号線6aに出力されている受信信号を入力し、復調データをバス26に出力する。

【0012】発呼回路10は、バス26からの信号によって、電話番号情報を入力し、信号線10aにDTMFの選択信号を出力する。

【0013】加算回路12は、信号線8aの情報と信号線10aの情報とを入力し、加算した結果を信号線12aに出力する。

【0014】カラー情報を読み取り可能な読取回路14は、読み取りデータをバス26に出力する。

【0015】カラー情報を記録可能な記録回路16は、バス26に出力されている情報を順次1ライン毎に記録する。

【0016】メモリ回路18は、ワーク用のメモリ(RAM)、また、読み取りデータの生情報、または、符号化した情報を格納したり、また、受信情報、または、復号化した情報等を、バス26を介して格納するために使用する。

【0017】操作部20は、ワンタッチダイヤル、短縮ダイヤル、テンキー、*キー、#キー、スタートキー、ストップキー、セットキー、メモリ18への登録キー、受信時携帯端末への送信選択キー、その他のファンクションキーを有し、押下されたキー情報は、バス26に出力される。操作部20には、表示部があり、バス26に出力されている情報を入力し、表示する。

【0018】CPU(中央処理装置)22は、通信装置システムの制御を実行するが、その制御プログラムは、ROM24に格納される。

【0019】無線通信部28は、無線を介して、携帯端末T1と通信する。

【0020】携帯端末T1は、無線を介して、有線接続されている通信端末T2、特に、無線通信部28との通信を実行する。

【0021】また、通信装置システムCS1は、無線接続される携帯端末T1と、有線接続されている通信端末T2(NCU2～無線通信部28)とを有する通信装置システムであり、無線接続される携帯端末T1からの送信が選択されたときに、近くに有線接続されている通信端末T2が存在するか否かによって、無線接続される携帯端末から直接、通信を実行するか、または、携帯端末T1からの無線を介した通信をせずに、有線に接続され

【0022】具体的には、無線接続される携帯端末T1からの送信が選択されたときに、有線接続されている通信端末T2が近くに存在していないと、無線接続される携帯端末T1から直接、通信を実行し、一方、有線接続されている通信端末T2が近くに存在していると、携帯端末T1からの無線を介した通信をせずに、有線に接続されている通信端末T2を使用し、有線を介して通信を実行する。

【0023】さらに、有線接続されている通信端末T2が近くに存在していても、携帯端末T1からの無線を介した通信を選択することができる。

【0024】ROM24には、図1に示す有線接続されている通信端末T2(NCU2～無線通信部28)の制御プログラムが格納されている。

【0025】携帯端末T1には、携帯端末T1が無線接続される制御プログラムが格納されている。

【0026】図2は、第1の実施例において、携帯端末T1が無線接続される制御動作を示すフローチャートである。

【0027】S2では、通信が選択されたか否かを調べ、通信が選択されれば、S6に進み、通信が選択されなければ、S4に進み、その他の処理をする。

【0028】S6では、携帯端末T1から直接、無線通信が選択されたか否かを調べ、携帯端末T1から直接、無線通信が選択されていれば、S12に進み、直接、無線を介した通信を実行し、携帯端末T1から直接、無線通信が選択されていなければ、S8に進む。

【0029】S8では、この携帯端末T1の近くに、有線接続の端末が存在するか否かを調べ、携帯端末T1の近くに、有線接続されている端末が存在していれば、S10に進み、有線接続されている端末と通信し、携帯端末T1の近くに、有線接続の端末が存在していなければ、S12に進む。

【0030】図4、図5は、第1の実施例において、有線接続されている通信端末T2の制御動作を示すフローチャートである。

【0031】S32では、バス26を介して、メモリ18をイニシャライズし、S34では、バス26を介して、操作部の表示部をクリアし、S36では、バス26を介して、NCU2のCMLをオフする。

【0032】S38では、携帯端末T1からの送信が選択されたか否かを調べ、携帯端末T1からの送信が選択されていると、S40に進み、携帯端末T1からの送信が選択されていなければ、S46に進む。

【0033】S40では、バス26を介して、NCU2のCMLをオンし、S42では、バス26を介して、発呼回路を使用し、指定された宛先へ発呼し、S44では、携帯端末T1から、指定された通信を実行する。

か否かを調べ、自機の操作部から送信が選択されていれば、S48に進み、自機の操作部から送信が選択されていなければ、S58に進む。

【0035】S48では、バス26を介して、NCU2のCMLをオンし、S50では、バス26を介して、発呼回路を使用し、指定された宛先へ発呼し、S52では、前手順を実行し、S54では、画信号を読み取り、ファクシミリ送信し、S56では、後手順を実行する。

【0036】S58では、着信があるか否かを調べ、着信があれば、S62に進み、着信がなければ、S60に進み、その他の処理をする。

【0037】S62では、バス26を介して、NCU2のCMLをオンし、S64では、指定された通信を実行し、S66では、バス26を介して、NCU2のCMLをオフする。

【0038】S68では、携帯端末T1への送信が選択されているか否かを調べ、携帯端末T1への送信が選択されていると、S70に進み、受信した情報を携帯端末T1へ送信し、携帯端末T1への送信が選択されていなければ、S72に進み、受信した情報のプリントを実行する。

【0039】[第2の実施例] 第2の実施例は、有線接続されている通信端末T2が、近くに存在していれば、携帯端末T1から無線を介した通信をせずに、有線に接続されている通信端末を使用し、有線を介して通信を実行するモードを第1のモードとした場合、無線接続されている携帯端末から特定の通信モードが選択されたときには、上記第1のモードを無効とし、無線接続されている携帯端末から直接、通信を実行する実施例である。

【0040】なお、上記特定の通信モードは、たとえば、Eメール送信であり、特定の通信モード以外の通信モードは、たとえば、ウェブ通信、ファクシミリ通信である。

【0041】第2の実施例における制御は、第1の実施例における制御において、無線接続される携帯端末の制御のみが異なる。

【0042】図3は、本発明の第2の実施例において、携帯端末T1が無線接続される制御動作を示すフローチャートである。

【0043】なお、図3には、無線接続される携帯端末T1の制御動作のうちで、図2に示す動作と異なる動作のみが示されている。

【0044】S20は、S8におけるYESが示されている。

【0045】S22では、Eメール送信が選択されたか否かを調べ、Eメール送信が選択されていると、S26(S12)に進み、Eメール送信が選択されていないと、すなわち、ウェブ通信、または、ファクシミリ通信

される携帯端末を外出先で使用し、無線接続される携帯端末からの送信が選択されたときに、有線接続されている通信端末T2が近くに存在していなければ、無線接続される携帯端末から直接、通信するので、外出時に通信が可能であり、一方、無線接続される携帯端末を自宅で使用し、有線接続されている通信端末T2が近くに存在していると、携帯端末T1から無線を介した通信を実行せずに、有線接続されている通信端末T2を使用して通信するので、無線を介して通信する場合よりも、通信費を安く抑えることができる。

【0047】また、上記第2の実施例によれば、無線接続されている携帯端末を自宅で使用し、近くに有線接続されている通信端末T2が存在している時でも、たとえば、Eメール送信のリターンを携帯端末で直接もらいたい場合等、携帯端末からの無線を介して通信することができる。

【0048】さらに、上記第2の実施例によれば、無線接続されている携帯端末を自宅で使用し、近くに有線接続されている通信端末T2が存在している時でも、無線接続される携帯端末からEメール送信をし、Eメール送信のリターンを携帯端末で直接もらいたい場合、携帯端末からの無線を介して通信することができ、一方、無線接続されている携帯端末からウェブ通信、または、ファクシミリ通信を実行し、これらの通信のリターンを受信することがなければ、携帯端末で直接、受信する必要が無いので、携帯端末からの無線を介した通信をせずに、有線に接続された通信端末を使用し、無線を介した通信を実行するよりも通信費を安く抑えることができる。

【0049】なお、上記各実施例において、有線接続されている通信端末T2として、ファクシミリ装置以外の通信端末を使用するようにしてもよい。

【0050】

【発明の効果】請求項1、2記載の発明によれば、外出時に通信が可能であり、一方、無線接続される携帯端末を自宅で使用し、有線接続されている通信端末が近くに存在していると、無線を介して通信するよりも、通信費を安く抑えることができるという効果を奏する。

【0051】請求項3記載の発明によれば、無線接続されている携帯端末を自宅で使用し、近くに有線接続されている通信端末が存在している時でも、携帯端末からの無線を介した通信を実行することができるという効果を奏する。

【0052】請求項4、5、6記載の発明によれば、無線接続されている携帯端末を自宅で使用し、近くに有線接続されている通信端末が存在しているときでも、無線接続される携帯端末からEメールを送信し、Eメール送信のリターンを携帯端末で直接もらいたい場合、携帯端末からの無線を介して通信することができ、一方、無線

することがなければ、無線を介して通信する場合よりも通信費を安く抑えることができるという効果を奏する。

【図面の簡単な説明】

【図1】 本発明の第1の実施例である通信装置システムCS1のブロック図である。

【図2】 第1の実施例において、携帯端末T1が無線接続される制御動作を示すフローチャートである。

【図3】 本発明の第2の実施例において、携帯端末T1が無線接続される制御動作を示すフローチャートである。

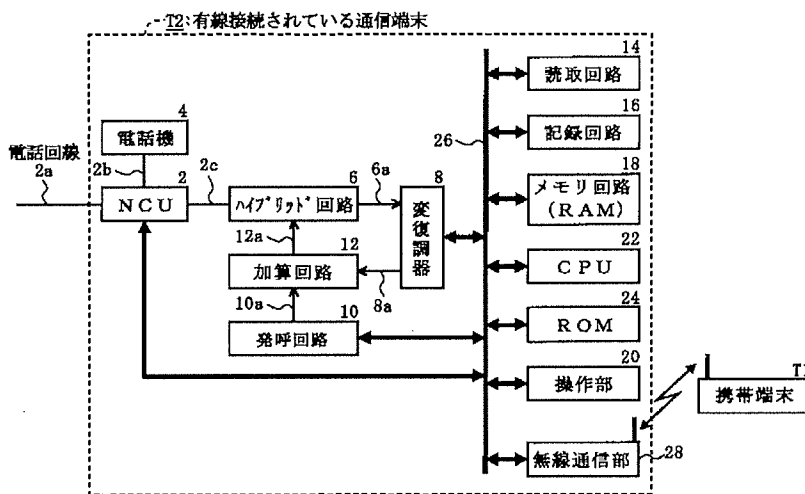
【図4】 第1の実施例において、有線接続されている通信端末T2の制御動作を示すフローチャートである。

【図5】 第1の実施例において、有線接続されている通信端末T2の制御動作を示すフローチャートである。

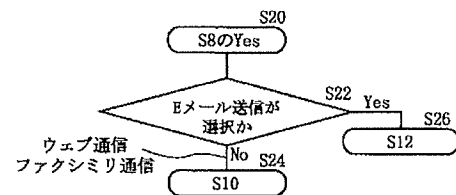
【符号の説明】

CS1…通信装置システム、
T1…携帯端末、
T2…有線接続されている通信端末、
18…メモリ回路、
20…操作部、
22…CPU、
24…ROM、
28…無線通信部。

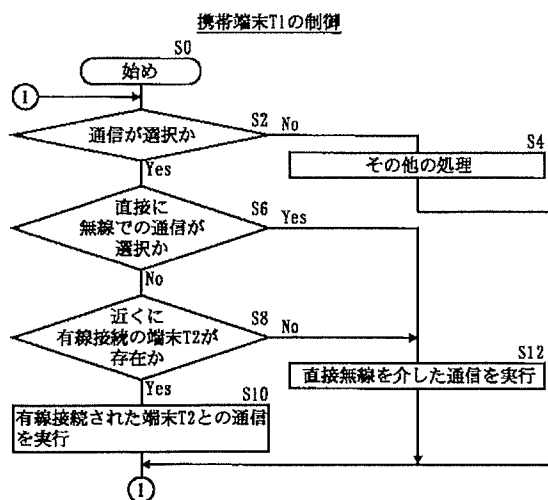
【図1】



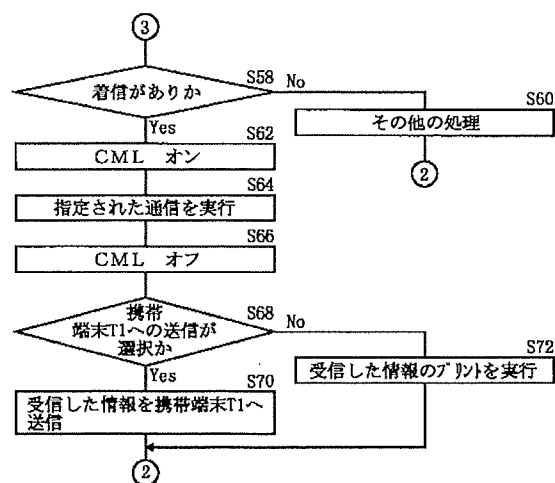
【図3】



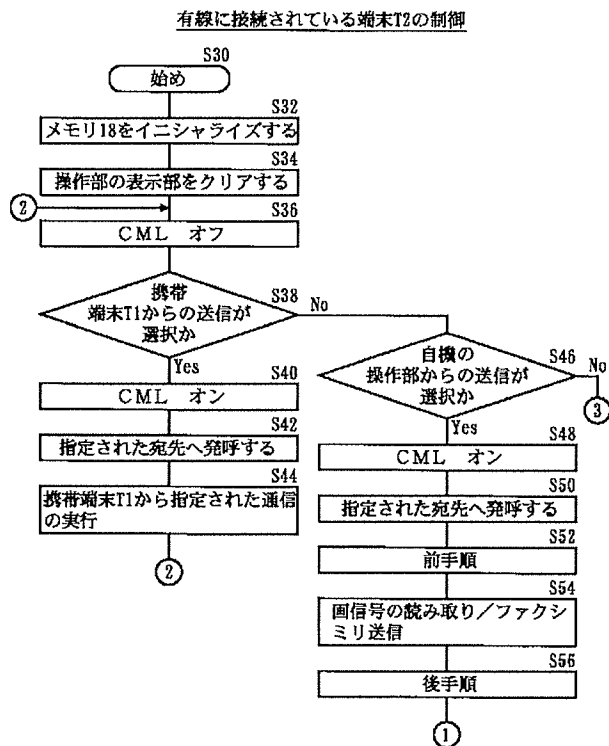
【図2】



【図5】



【図4】



PATENT ABSTRACTS OF JAPAN

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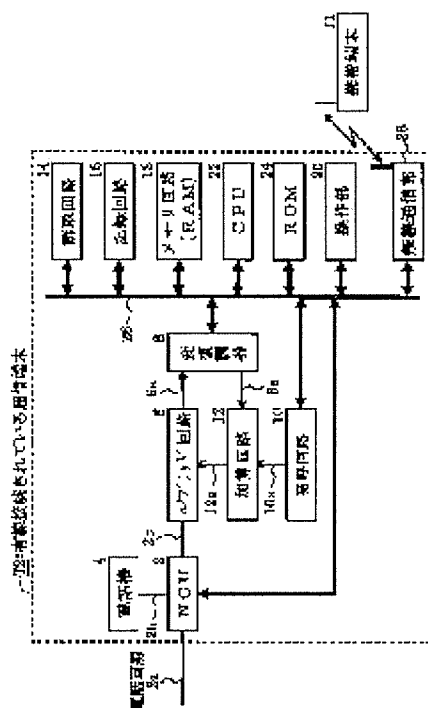
(22)Date of filing : 27.04.2001 (72)Inventor : YOSHIDA TAKEHIRO

(54) COMMUNICATION DEVICE SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a communication device system by which a user makes communication at a visit place with a mobile terminal for wireless connection and can make the communication cost lower than using the wireless connection mobile terminal at its own house and a wired connection terminal is near at hand.

SOLUTION: The communication device system decides direct execution of communication by using a wireless connected mobile terminal or use of a wired connection communication terminal to execute wired communication without wireless communication from the mobile terminal depending on whether or not the wired connection communication terminal exists near the user when transmission from the wireless connected mobile terminal is selected.



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CLAIMS

[Claim(s)]

[Claim 1] A personal digital assistant by which wireless connection is carried out.

A communication terminal by which wired connection is carried out.

When transmission from a personal digital assistant by which is the communication device system provided with the above, and wireless connection is carried out is chosen, . [whether communication is directly performed from a personal digital assistant by which wireless connection is carried out to the neighborhood according to whether a communication terminal by which wired connection is carried out exists, and] Or a communication terminal by which wired connection is carried out is used without communicating via radio from the above-mentioned personal digital assistant, and it determines whether to perform communication via a cable.

[Claim 2] When transmission from a personal digital assistant by which wireless connection is carried out is chosen in claim 1, If a communication terminal by which wired connection is carried out does not exist in the neighborhood and a communication terminal by which performs communication directly and wired connection is carried out on the other hand from a personal digital assistant by which wireless connection is carried out exists in the neighborhood, A communication device system using a communication terminal connected to a cable, without carrying out communication which passed radio from the above-mentioned personal digital assistant, and performing communication via a cable.

[Claim 3] A communication device system being able to choose communication through radio from a personal digital assistant even if a communication terminal by which wired connection is carried out exists in the neighborhood in claim 1 or claim 2.

[Claim 4] In claim 1, if a communication terminal by which wired connection is carried out exists in the neighborhood, A communication terminal connected to a cable is used without carrying

out communication which passed radio from the above-mentioned personal digital assistant, A communication device system performing communication directly from a personal digital assistant by which makes the 1st mode the mode in which communication is performed via a cable, repeals the 1st mode of the above when specific communicate mode is chosen from a personal digital assistant by which wireless connection is carried out, and wireless connection is carried out.

[Claim 5]A communication device system characterized by the above-mentioned specific communicate mode being E-mail transmission in claim 4.

[Claim 6]A communication device system characterized by communicate modes other than the above-mentioned specific communicate mode being web communication or facsimile communication in claim 4 or claim 5.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the communication device system which has a communication device system, a personal digital assistant by which wireless connection is carried out especially, and the communication terminal by which wired connection is carried out.

[0002]

[Description of the Prior Art]When the communication from a personal digital assistant by which wireless connection is carried out is chosen as a conventional communication device system which has a personal digital assistant by which wireless connection is carried out, and the communication terminal by which wired connection is carried out, Communication which passed radio between the communication terminals by which wired connection is carried out is performed, and the communication device system which performs communication via a cable is proposed from this communication terminal by which wired connection is carried out.

[0003]

[Problem(s) to be Solved by the Invention]However, in the communication device system of the above-mentioned conventional example, since the communication from a personal digital assistant by which wireless connection is carried out certainly performs communication via the communication terminal by which wired connection is carried out, there is a problem that the personal digital assistant by which wireless connection is carried out cannot be carried out at the time of going out, and cannot be used effectively.

[0004]The communication at the time of going out is possible for this invention by the personal digital assistant by which wireless connection is carried out, It aims at providing the communication device system which can hold down communication charges at a low price, when the personal digital assistant by which wireless connection is carried out is used on the

other hand at a house and the communication terminal by which wired connection is carried out exists in the neighborhood.

[0005]

[Means for Solving the Problem]When transmission from a personal digital assistant by which wireless connection is carried out is chosen, this invention, . [whether communication is directly performed from a personal digital assistant by which wireless connection is carried out to the neighborhood according to whether a communication terminal by which wired connection is carried out exists, and] Or it is a communication device system which determines whether to perform communication via a cable by using a communication terminal by which wired connection is carried out, without communicating via radio from the above-mentioned personal digital assistant.

[0006]

[An embodiment of the invention and an example] The [1st example] Drawing 1 is a block diagram showing communication device system CS1 which is the 1st example of this invention.

[0007]Communication device system CS1 is constituted by the personal digital assistant T1 and the communication terminal T2 by which wired connection is carried out.

[0008]The communication terminal T2 by which wired connection is carried out is a facsimile machine, and a personal digital assistant by which wireless connection is constituted and done in NCU2 - the Radio Communications Department 28 is the personal digital assistant T1.

[0009]In order to use a telephone network for data communications etc., it connects with a terminal of the circuit, and NCU(network control unit) 2 performs connect control of telephone exchange network, it performs a change to a data communication line, or holds a loop. By control from the bus 26, NCU2 connects the telephone line 2a to the telephone side (CML OFF), or it connects the telephone line 2a to the facsimile machine side (CML one). The telephone line 2a is connected to the telephone 4 side in a normal state.

[0010]The hybrid circuit 6 separates the signal of a transmission system, and the signal of a receiving system, sends out the sending signal from the adder circuit 12 to the telephone line 2a by NCU2 course, receives the signal from the other party by NCU2 course, and sends it to the modulator and demodulator 8 via signal wire 6a.

[0011]The modulator and demodulator 8 are modulator and demodulator which perform the abnormal conditions based on ITU-T recommendation V.8, V.21, V.27ter, V.29, V.17, and V.34, and a recovery, and each transmission mode is specified by control of the bus 26. The modulator and demodulator 8 input the sending signal from the bus 26, input the input signal which outputs modulation data to the signal wire 8a, and is outputted to the signal wire 6a, and output demodulated data to the bus 26.

[0012]With the signal from the bus 26, the call origination circuit 10 inputs telephone number

information, and outputs the selection signal of DTMF to the signal wire 10a.

[0013]The adder circuit 12 outputs the result of having inputted and added the information on the signal wire 8a, and the information on the signal wire 10a to the signal wire 12a.

[0014]The read circuit 14 which can read color information outputs read data to the bus 26.

[0015]The record circuit 16 which can record color information records the information currently outputted to the bus 26 for every line one by one.

[0016]Since the memory (RAM) for works and the raw information of read data, or the coded information is stored and receipt information or the decrypted information is stored via the bus 26, the memory circuit 18 is used.

[0017]The final controlling element 20 has a transmitting selection key to a personal digital assistant, and other function keys at the time of an one-touch dial, abbreviated dialing, a ten key, the * key, the # key, a start key, a stop key, a set key, the register key to the memory 18, and reception, and the pushed key information is outputted to the bus 26. There is an indicator in the final controlling element 20, and the information currently outputted to the bus 26 is inputted and displayed.

[0018]Although CPU(central processing unit) 22 performs control of a communication device system, the control program is stored in ROM24.

[0019]The Radio Communications Department 28 communicates with the personal digital assistant T1 via radio.

[0020]The personal digital assistant T1 performs the communication terminal T2 by which wired connection is carried out, especially communication with the Radio Communications Department 28 via radio.

[0021]The personal digital assistant T1 in which wireless connection of communication device system CS1 is carried out, When the transmission from the personal digital assistant T1 by which is a communication device system which has the communication terminal T2 (NCU2 - Radio Communications Department 28) by which wired connection is carried out, and wireless connection is carried out is chosen, It determines whether to perform communication via a cable by using the communication terminal connected to the cable, without carrying out communication through the radio from [from the personal digital assistant by which wireless connection is carried out] whether communication is performed directly and the personal digital assistant T1 by whether the communication terminal T2 by which wired connection is carried out to the neighborhood exists.

[0022]When the transmission from the personal digital assistant T1 by which wireless connection is carried out is specifically chosen, If the communication terminal T2 by which performs communication directly and wired connection is carried out on the other hand from the personal digital assistant T1 by which wireless connection is carried out if the communication terminal T2 by which wired connection is carried out does not exist in the

neighborhood exists in the neighborhood, The communication terminal T2 connected to the cable is used without carrying out communication through the radio from the personal digital assistant T1, and communication is performed via a cable.

[0023]Even if the communication terminal T2 by which wired connection is carried out exists in the neighborhood, communication through the radio from the personal digital assistant T1 can be chosen.

[0024]The control program of the communication terminal T2 (NCU2 - Radio Communications Department 28) which is shown in drawing 1 and by which wired connection is carried out is stored in ROM24.

[0025]The control program with which wireless connection of the personal digital assistant T1 is carried out is stored in the personal digital assistant T1.

[0026]Drawing 2 is a flow chart with which the personal digital assistant T1 shows the control action by which wireless connection is carried out in the 1st example.

[0027]In S2, if it investigates whether communication was chosen or not and communication is chosen, it will progress to S6 and communication will not be chosen, it progresses to S4 and others are processed.

[0028]In S6, if it investigates whether radio was directly chosen from the personal digital assistant T1 and radio is directly chosen from the personal digital assistant T1, it progresses to S12, and if communication through radio is performed and radio is not directly chosen from the personal digital assistant T1, it will progress to S8.

[0029]If it investigates whether the terminal of wired connection exists near this personal digital assistant T1 in S8 and the terminal by which wired connection is carried out exists near the personal digital assistant T1, If it communicates with the terminal by which wired connection is carried out by progressing to S10 and the terminal of wired connection does not exist near the personal digital assistant T1, it progresses to S12.

[0030]Drawing 4 and drawing 5 are flow charts which show the control action of the communication terminal T2 by which wired connection is carried out in the 1st example.

[0031]The memory 18 is initialized via the bus 26, by S34, the indicator of a final controlling element is cleared via the bus 26, and CML of NCU2 is turned off via the bus 26 by S36 S32.

[0032]In S38, if it investigates whether the transmission from the personal digital assistant T1 was chosen, and the transmission from the personal digital assistant T1 is chosen, it progresses to S40 and the transmission from the personal digital assistant T1 is not chosen, it progresses to S46.

[0033]And by S42, via the bus 26, a call origination circuit is used, call origination is carried out to the specified address, and specified communication is performed from the personal digital assistant T1 by S44 S40. [via the bus 26] [CML of NCU2]

[0034]In S46, if the information on the final controlling element 20 is inputted, it investigates

whether transmission was chosen from the final controlling element of a self-opportunity via the bus 26, and transmission is chosen from the final controlling element of a self-opportunity, it progresses to S48 and transmission is not chosen from the final controlling element of a self-opportunity, it progresses to S58.

[0035]A pre procedure is performed, by S54, a picture signal is read, facsimile transmission is carried out [, in S48, via the bus 26 a call origination circuit is used call origination is carried out to the specified address S50,] S52, and a defensive hand's order is performed in S56. [via the bus 26] [CML of NCU2]

[0036]In S58, if it investigates whether there is any mail arrival and there is mail arrival, it will progress to S62, and if there is no mail arrival, it will progress to S60 and others will be processed.

[0037]By S62, and specified communication is performed and CML of NCU2 is turned off via the bus 26 by S66 S64. [via the bus 26] [CML of NCU2]

[0038]In S68, if it investigates whether transmission to the personal digital assistant T1 is chosen, and transmission to the personal digital assistant T1 is chosen, the information which he followed to S70 and was received is transmitted to the personal digital assistant T1 and transmission to the personal digital assistant T1 is not chosen, the print of the information which he followed to S72 and was received is performed.

[0039]The [2nd example] If the 2nd example exists in the neighborhood, the communication terminal T2 by which wired connection is carried out, The communication terminal connected to the cable is used without carrying out communication which passed radio from the personal digital assistant T1, When the mode in which communication is performed via a cable is made into the 1st mode and specific communicate mode is chosen from the personal digital assistant by which wireless connection is carried out, it is an example which performs communication directly from the personal digital assistant by which repeals the 1st mode of the above and wireless connection is carried out.

[0040]The above-mentioned specific communicate mode is E-mail transmission, for example, and communicate modes other than specific communicate mode are web communication and facsimile communication, for example.

[0041]In the control in the 1st example, the control in the 2nd example differs only in the control of a personal digital assistant by which wireless connection is carried out.

[0042]Drawing 3 is a flow chart with which the personal digital assistant T1 shows the control action by which wireless connection is carried out in the 2nd example of this invention.

[0043]Only the operation shown in drawing 2 and different operation are shown in drawing 3 among the control actions of the personal digital assistant T1 by which wireless connection is carried out.

[0044]YES [in / in S20 / S8] is shown.

[0045]In S22, if it investigates whether E-mail transmission was chosen and E-mail transmission is chosen, it will progress to S26 (S12), and if E-mail transmission is not chosen, it will progress that they are web communication or facsimile communication to S24 (S10).

[0046]That is, when according to the 1st example the personal digital assistant by which wireless connection is carried out is used by a place where one has gone and the transmission from a personal digital assistant by which wireless connection is carried out is chosen, Since it communicates directly from the personal digital assistant by which wireless connection is carried out if the communication terminal T2 by which wired connection is carried out does not exist in the neighborhood, If it can communicate at the time of going out, the personal digital assistant by which wireless connection is carried out is used on the other hand at a house and the communication terminal T2 by which wired connection is carried out exists in the neighborhood, Since it communicates from the personal digital assistant T1 using the communication terminal T2 by which wired connection is carried out, without performing communication through radio, communication charges can be held down at a low price rather than the case where it communicates via radio.

[0047]According to the 2nd example of the above, the personal digital assistant by which wireless connection is carried out is used at a house, and even when the communication terminal T2 by which wired connection is carried out to the neighborhood exists, it can communicate via the radio from a personal digital assistant, for example to get the return of E-mail transmission directly with a personal digital assistant.

[0048]According to the 2nd example of the above, the personal digital assistant by which wireless connection is carried out is used at a house, Even when the communication terminal T2 by which wired connection is carried out to the neighborhood exists, E-mail transmission is carried out from the personal digital assistant by which wireless connection is carried out, From a personal digital assistant to the web communication by which can communicate via the radio from a personal digital assistant and wireless connection is carried out on the other hand to get the return of E-mail transmission directly with a personal digital assistant. Or with a personal digital assistant, if facsimile communication is performed and the return of these communications is not received, since there is no necessity of receiving, directly, The communication terminal connected to the cable can be used without carrying out communication through the radio from a personal digital assistant, and communication charges can be held down at a low price rather than performing communication through radio.

[0049]It may be made to use communication terminals other than a facsimile machine in each above-mentioned example as the communication terminal T2 by which wired connection is carried out.

[0050]

[Effect of the Invention]According to the invention of claim 1 and two statements, it can

communicate at the time of going out, and if the personal digital assistant by which wireless connection is carried out is used on the other hand at a house and the communication terminal by which wired connection is carried out exists in the neighborhood, the effect that communication charges can be held down at a low price will be done so rather than communicating via radio.

[0051]According to the invention according to claim 3, the personal digital assistant by which wireless connection is carried out is used at a house, and even when the communication terminal by which wired connection is carried out to the neighborhood exists, the effect that communication through the radio from a personal digital assistant can be performed is done so.

[0052]According to the invention of claims 4 and 5 and six statements, the personal digital assistant by which wireless connection is carried out is used at a house, Even when the communication terminal by which wired connection is carried out to the neighborhood exists, E-mail is transmitted from the personal digital assistant by which wireless connection is carried out, From a personal digital assistant to the web communication by which can communicate via the radio from a personal digital assistant and wireless connection is carried out on the other hand to get the return of E-mail transmission directly with a personal digital assistant. Or if facsimile communication is performed and the return of these communications is not received, the effect that communication charges can be held down at a low price rather than the case where it communicates via radio will be done so.

[Translation done.]

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TECHNICAL FIELD

[Field of the Invention]This invention relates to the communication device system which has a communication device system, a personal digital assistant by which wireless connection is carried out especially, and the communication terminal by which wired connection is carried out.

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PRIOR ART

[Description of the Prior Art]When the communication from a personal digital assistant by which wireless connection is carried out is chosen as a conventional communication device system which has a personal digital assistant by which wireless connection is carried out, and the communication terminal by which wired connection is carried out, Communication which passed radio between the communication terminals by which wired connection is carried out is performed, and the communication device system which performs communication via a cable is proposed from this communication terminal by which wired connection is carried out.

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EFFECT OF THE INVENTION

[Effect of the Invention]According to the invention of claim 1 and two statements, it can communicate at the time of going out, and if the personal digital assistant by which wireless connection is carried out is used on the other hand at a house and the communication terminal by which wired connection is carried out exists in the neighborhood, the effect that communication charges can be held down at a low price will be done so rather than communicating via radio.

[0051]According to the invention according to claim 3, the personal digital assistant by which wireless connection is carried out is used at a house, and even when the communication terminal by which wired connection is carried out to the neighborhood exists, the effect that communication through the radio from a personal digital assistant can be performed is done so.

[0052]According to the invention of claims 4 and 5 and six statements, the personal digital assistant by which wireless connection is carried out is used at a house, Even when the communication terminal by which wired connection is carried out to the neighborhood exists, E-mail is transmitted from the personal digital assistant by which wireless connection is carried out, From a personal digital assistant to the web communication by which can communicate via the radio from a personal digital assistant and wireless connection is carried out on the other hand to get the return of E-mail transmission directly with a personal digital assistant. Or if facsimile communication is performed and the return of these communications is not received, the effect that communication charges can be held down at a low price rather than the case where it communicates via radio will be done so.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention]However, in the communication device system of the above-mentioned conventional example, since the communication from a personal digital assistant by which wireless connection is carried out certainly performs communication via the communication terminal by which wired connection is carried out, there is a problem that the personal digital assistant by which wireless connection is carried out cannot be carried out at the time of going out, and cannot be used effectively.

[0004]The communication at the time of going out is possible for this invention by the personal digital assistant by which wireless connection is carried out, It aims at providing the communication device system which can hold down communication charges at a low price, when the personal digital assistant by which wireless connection is carried out is used on the other hand at a house and the communication terminal by which wired connection is carried out exists in the neighborhood.

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MEANS

[Means for Solving the Problem]When transmission from a personal digital assistant by which wireless connection is carried out is chosen, this invention, . [whether communication is directly performed from a personal digital assistant by which wireless connection is carried out to the neighborhood according to whether a communication terminal by which wired connection is carried out exists, and] Or it is a communication device system which determines whether to perform communication via a cable by using a communication terminal by which wired connection is carried out, without communicating via radio from the above-mentioned personal digital assistant.

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EXAMPLE

[An embodiment of the invention and an example]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is a block diagram of communication device system CS1 which is the 1st example of this invention.

[Drawing 2]In the 1st example, the personal digital assistant T1 is a flow chart which shows the control action by which wireless connection is carried out.

[Drawing 3]In the 2nd example of this invention, the personal digital assistant T1 is a flow chart which shows the control action by which wireless connection is carried out.

[Drawing 4]In the 1st example, it is a flow chart which shows the control action of the communication terminal T2 by which wired connection is carried out.

[Drawing 5]In the 1st example, it is a flow chart which shows the control action of the communication terminal T2 by which wired connection is carried out.

[Description of Notations]

CS1 -- Communication device system

T1 -- Personal digital assistant,

T2 -- Communication terminal by which wired connection is carried out,

18 -- Memory circuit

20 -- Final controlling element,

22 -- CPU,

24 -- ROM,

28 -- Radio Communications Department.

[Translation done.]